

THAT WHICH IS CLAIMED:

1. A device for providing a mobile terminal simultaneous battery charging and data transfer, the device comprising:

a processing unit;

a power line communication modem in communication with the processing unit and a shared power line network;

a first data transfer interface in communication with the processing unit for transferring data to and from the mobile terminal;

a power converter in communication with the shared power line network;

and

a charging unit and interface in communication with the power converter, wherein the charging interface and the data transfer interface provide for communication with a mobile terminal to provide the mobile terminal with simultaneous battery charging and data transfer.

2. The device of Claim 1, further comprising a memory unit in communication with the processing unit.

3. The device of Claim 1, wherein the first data transfer interface further comprises a data Input/Output (I/O) interface.

4. The device of Claim 1, wherein first data transfer interface further comprises a Universal Serial Bus interface.

5. The device of Claim 1, wherein the first data transfer interface further comprises a wireless data transfer interface.

6. The device of Claim 5, further comprising a short-range communication transceiver.

7. The device of Claim 6, wherein the short-range communication transceiver is chosen from the group consisting of an RF transceiver, an Infrared (IR) transceiver, a Wireless Local Area Network (WLAN) transceiver, and an Ultra Wide Band (UWB) transceiver.

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8. The device of Claim 1, further comprising a second data transfer interface in communication with the processing unit that transfers data to and from a data source device.

10 9. The device of Claim 1, further comprising a network association routine executed by the processing unit that associates one or more mobile terminals with the device.

15 10. The device of Claim 9, wherein the network association routine further associates one or more digital devices with the device to create sub-networks.

11. The device of Claim 10, further comprising an association database that stores an identity of one or more mobile terminals associated with the device.

20 12. The device of Claim 10, further comprising an association database that stores an identity of one or more digital devices associated with the device.

25 13. The device of Claim 1, further comprising a security and authentication routine executed by the processing unit that provides authentication for one or more mobile units.

30 14. The device of Claim 1, further comprising a battery charging routine executed by the processing unit that provides conditional battery charging based on current battery level.

15. The device of Claim 1, further comprising a file deletion routine executed by the processing unit that provides for idle files to be automatically deleted from an associated mobile terminal based on period of idleness.

5           16. The device of Claim 2, further comprising a game application stored in the memory unit that can be uploaded by the mobile terminal.

17. A system for providing a mobile terminal simultaneous battery charging and data transfer, the system comprising:

10                 a mobile terminal;

                  a first datacharger device that provides for simultaneous battery charging and data transfer to the mobile terminal, which includes a processing unit, a power line communication modem in communication with the processing unit, a first data transfer interface in communication with the processing unit and a charging unit in  
15                 communication with the power converter;

                  a shared power line network in communication with the first datacharger via the power line communication modem and the power converter; and

                  a first digital device in communication with the shared power line network that transfers data to the mobile terminal through the shared power line and the first data  
20                 transfer interface of the first datacharger device.

18. The system of Claim 17, further comprising a second digital device in communication with the first datacharger through a second data transfer interface included in the first datacharger device.

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19. The system of Claim 18, wherein the first datacharger device includes a second data transfer interface further defined as a wireless second data transfer interface.

20. The system of Claim 18, wherein the first datacharger device further  
30                 comprises a short-range communication transceiver.

21. The system of Claim 20, wherein the short-range communication transceiver is chosen from the group consisting of an RF transceiver, an Infrared (IR) transceiver, a Wireless Local Area Network (WLAN) transceiver, and an Ultra Wide Band (UWB) transceiver.

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22. The system of Claim 17, further comprising a network association routine executed by the processing unit that associates one or more mobile terminals with the device.

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23. The system of Claim 22, wherein the network association routine further associates one or more digital devices with the device to create sub-networks.

24. The system of Claim 17, further comprising a security and authentication routine executed by the processing unit that provides authentication for one or more mobile units.

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25. The system of Claim 17, further comprising a data transfer device that is in communication with the digital device and includes a processing unit and a power line communication modem in communication with the processing unit, a first data transfer interface in communication with the processing unit and the shared power line network.

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26. The system of Claim 25, wherein the data transfer device is further defined as a second datacharger device that further comprises a power converter in communication with the shared power line network and a charging unit in communication with the power converter.

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27. The system of Claim 25, wherein the data transfer device further comprises a Universal Serial Bus (USB) connection for providing USB connection to the digital device.

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28. The system of Claim 17, further comprising a Universal Serial Bus (USB) adapter device in communication with the shared power line network and the digital device.

5 29. A method for power line communication of data between a digital device and a mobile terminal while simultaneously charging a battery of the mobile terminal, the method comprising the steps of:

connecting a battery charging and data communication device to a power line;

10 connecting the mobile terminal to a charging interface and a data communication interface of the battery charging and data communication device; providing power to the battery of the mobile terminal; and simultaneously, communicating data between the mobile terminal and the digital device, whereby the data is communicated via the power line and the digital device is in communication with the power line.

20 30. The method of Claim 29, further comprising the step of authorizing the mobile terminal for data communication prior to communicating data between the mobile terminal and the digital device.

31. The method of Claim 30, wherein the step of authorizing the mobile terminal for data communication prior to providing data to the mobile terminal further comprises querying the mobile terminal for a pairing key to determine if the mobile device is authorized for data communication.

25 32. The method of Claim 31, further comprising the step of communicating, wirelessly, the pairing key from the mobile terminal to the battery charging and data communication device to provide for data communication authorization.

30 33. The method of Claim 29, further comprising the step of synchronizing the data communicated between the mobile terminal and the digital device.

34. The method of Claim 33, wherein the step of synchronizing the data communicated from the mobile terminal further comprises creating sub-network association for the mobile terminal and the battery charging and data communication device.

35. The method of Claim 34, wherein the step of synchronizing the data communicated from the mobile terminal further comprises selecting, from a stored list of sub-networks, sub-network association for the mobile terminal and the battery charging and data communication device.

36. The method of Claim 29, wherein the step of communicating data between the mobile terminal and a digital device further comprises the step of communicating data and a mobile terminal-provided destination address to the battery charging and data communication device.

37. The method of Claim 36, further comprising the step of performing network address translation on the mobile terminal-provided destination address prior to communicating the data to the digital device.

38. The method of Claim 29, wherein the step of communicating data between the mobile terminal and a digital device further comprises communicating, from the mobile terminal to a digital device, multimedia files created at the mobile terminal.

39. The method of Claim 29, wherein the step of communicating data between the mobile terminal and a digital device further comprises communicating, from the digital device to the mobile terminal, electronic mail that is received the digital device.

40. The method of Claim 29, wherein the step of communicating data between the mobile terminal and a digital device further comprises communicating, from

the digital device to the mobile terminal, updates to software applications implemented on the mobile terminal.

- 5        41.     The method of Claim 29, wherein the step of communicating data between the mobile terminal and a digital device further comprises communicating, from the digital device to the mobile terminal, calendar-type information related to a digital planner application.